Distributed Transmission —
FCC Rules for Transmitter Locations
& Service Areas

A Policy Presentation for
Federal Communications Commission Staff
July 26, 2004

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Agenda

- ✓ ATSC Distributed Transmission (DTx) Standards Update
- ✓ Issues Regarding Permitted Locations & Service Areas
- ✓ Locations Permitted for Distributed Transmitters (DTxTs)
- ✓ Service Areas of Distributed Transmitters (DTxTs)
- ✓ Example: Los Angeles
- ✓ Recommendations

ATSC DTx Standards Update

- ✓ Synchronization Standard for Distributed Transmission A/110
  - ✓ Adopted by ATSC Membership Ballot July 14, 2004
  - ✓ Defines Technology for Distributed Transmission Networks
- ✓ Recommended Practice:
  Synchronized Multiple Transmitter Networks PRP/111
  - ✓ Approved by Committee T3 for Full ATSC Membership Ballot
  - ✓ T3 Ballot Closed July 14, 2004
  - ✓ Describes Application of Distributed Transmission &
    Other Techniques (Distributed Translators, On-Channel Repeaters)

Issues re: Locations & Service Areas

- ✓ FCC Interest in Maximum Spectrum Efficiency
- ✓ Allowing Stations to Expand Service Areas
  - ✓ Maximizing Spectrum Efficiency by Delivering Greatest Service
  - ✓ Simultaneously Avoiding Additional Interference
- ✓ Permitting Broadcasters to Compete with Cable
  - ✓ Requires Set Top Reception, Hence Strong Signals
  - ✓ Requires Signals Delivered Wherever Carried on Cable
  - ✓ Service Limited by Smallest Aggregated Footprint of Stations
  - ✓ Current Rules Require Must-Carry Throughout DMA

Issues re: Locations & Service Areas (2)

- ✓ Market Sizes Vary Across the Country
  - ✓ Generally Smaller in the East
  - ✓ Generally Larger in the West
- ✓ Broadcasters Concerned About Adjacent Market Encroachment
  - ✓ Could Occur with Large Service Area & Small DMA

Permitted DTxT Locations

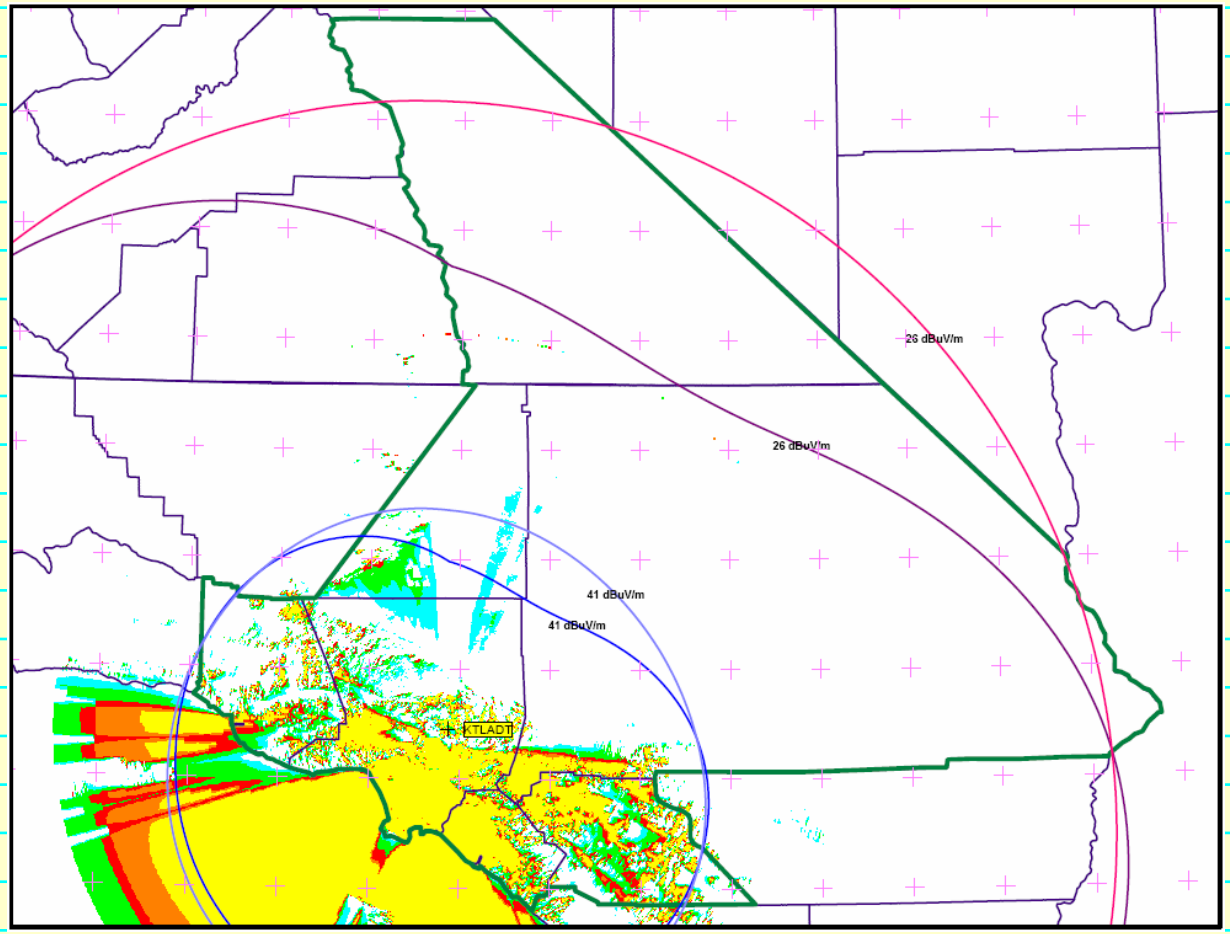
- ✓ Several Ways to Limit Locations
  - ✓ Inside Current Service Contour
    - ✓ From FCC Plan, Construction Permit, or License
  - ✓ Inside Theoretical Service Contour
    - ✓ Assumed Facility Used to Determine Contour
  - ✓ Inside Designated Market Area (DMA)
    - ✓ Used to Define Cable Must Carry Limitations (§76.56(e))
- ✓ Always Limited by *De Minimis* Rules

Permitted DTxT Service Areas

- ✓ Several Ways to Limit Service Areas
  - ✓ Inside Current Service Contour
    - ✓ Most Restrictive Approach — Precludes Many Service Improvements
  - ✓ Inside Theoretical Service Contour
    - ✓ Also Restrictive Approach — Precludes Many Service Improvements
  - ✓ Majority of Population Served Must Be Inside DMA
    - ✓ Avoids Encroachment Into Adjoining Markets
  - ✓ Constraining Interference Contour
    - ✓ Within Interference Contour of Current Facilities
    - ✓ Within Interference Contour of Theoretical Facility

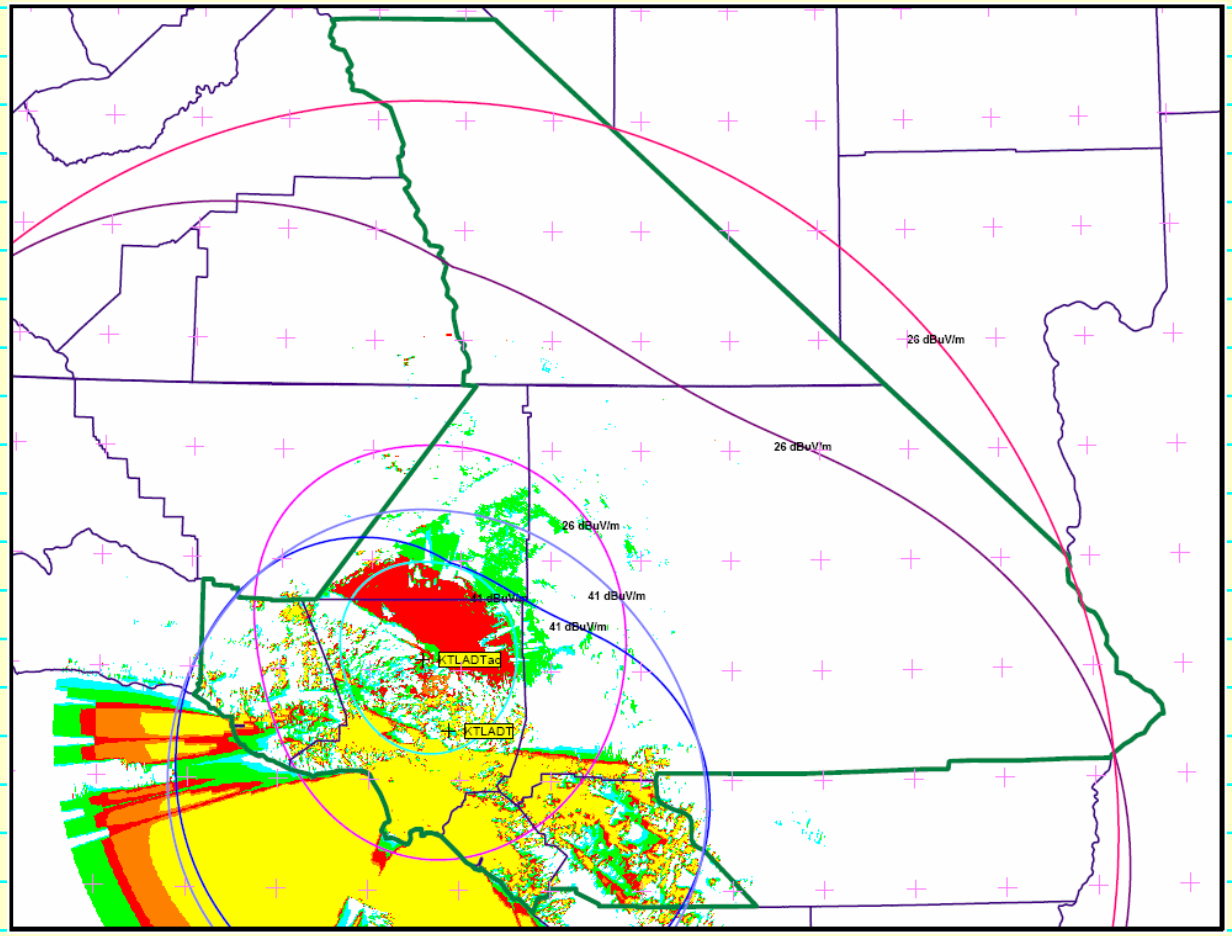
Example: Los Angeles

- ✓ KTLA-DT Channel 31, 1 MW, Mt Wilson, w/DMA Boundary



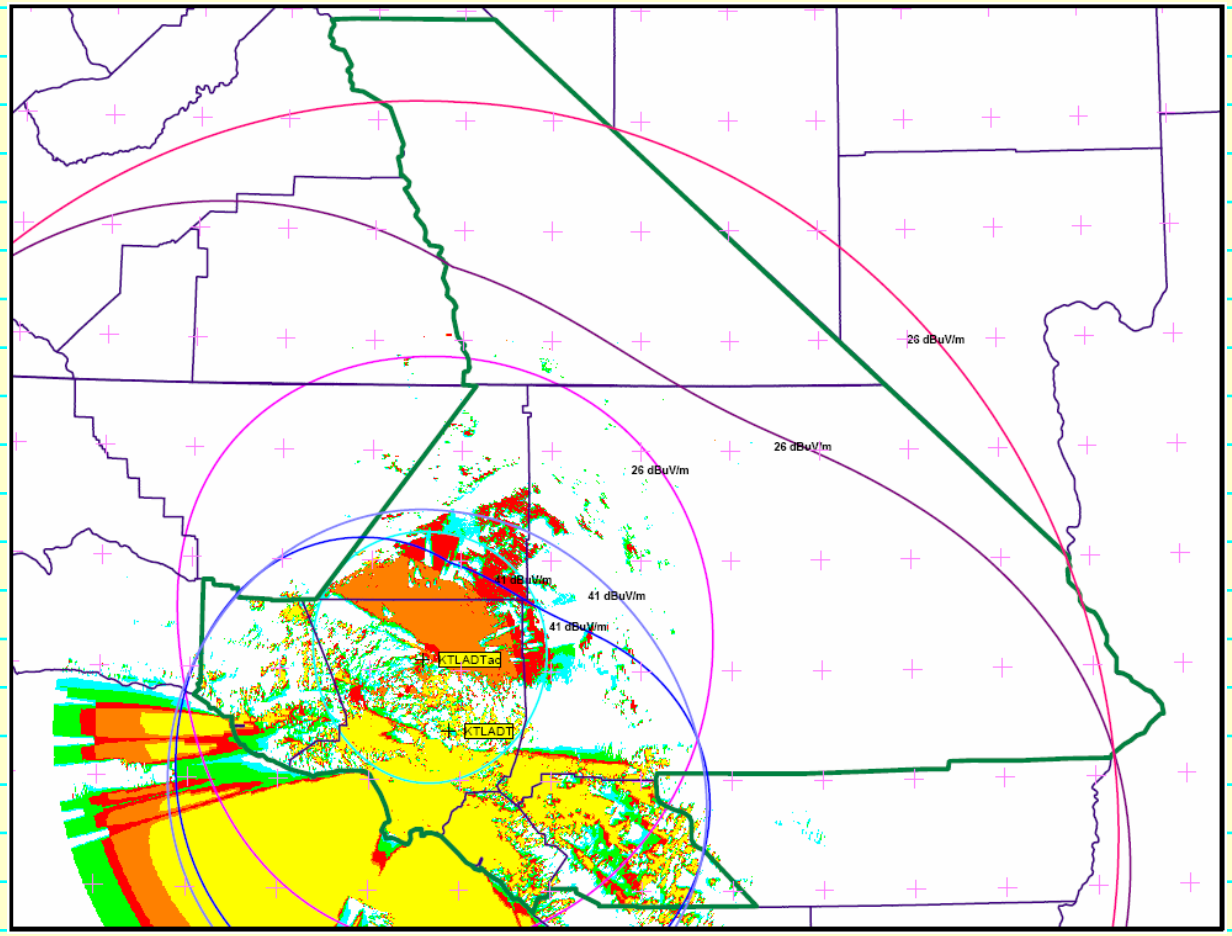
Example: Los Angeles (2)

- ✓ KTLA-DT Chnl 31, 1 MW Mt Wilson, w/100 W DTxT Acton



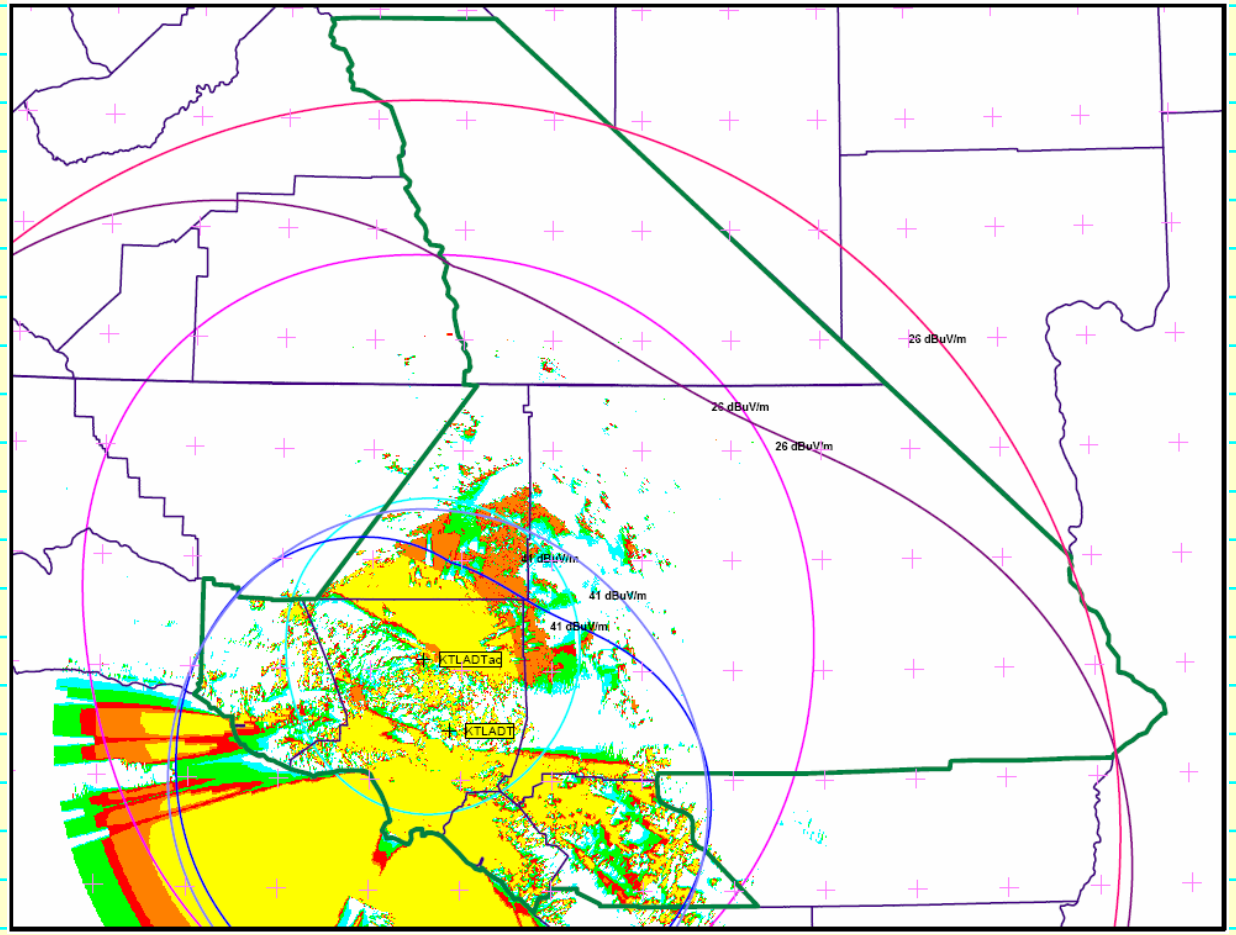
Example: Los Angeles (3)

✓ KTLA-DT Chnl 31, 1 MW Mt Wilson, w/1 kW DTxT Acton



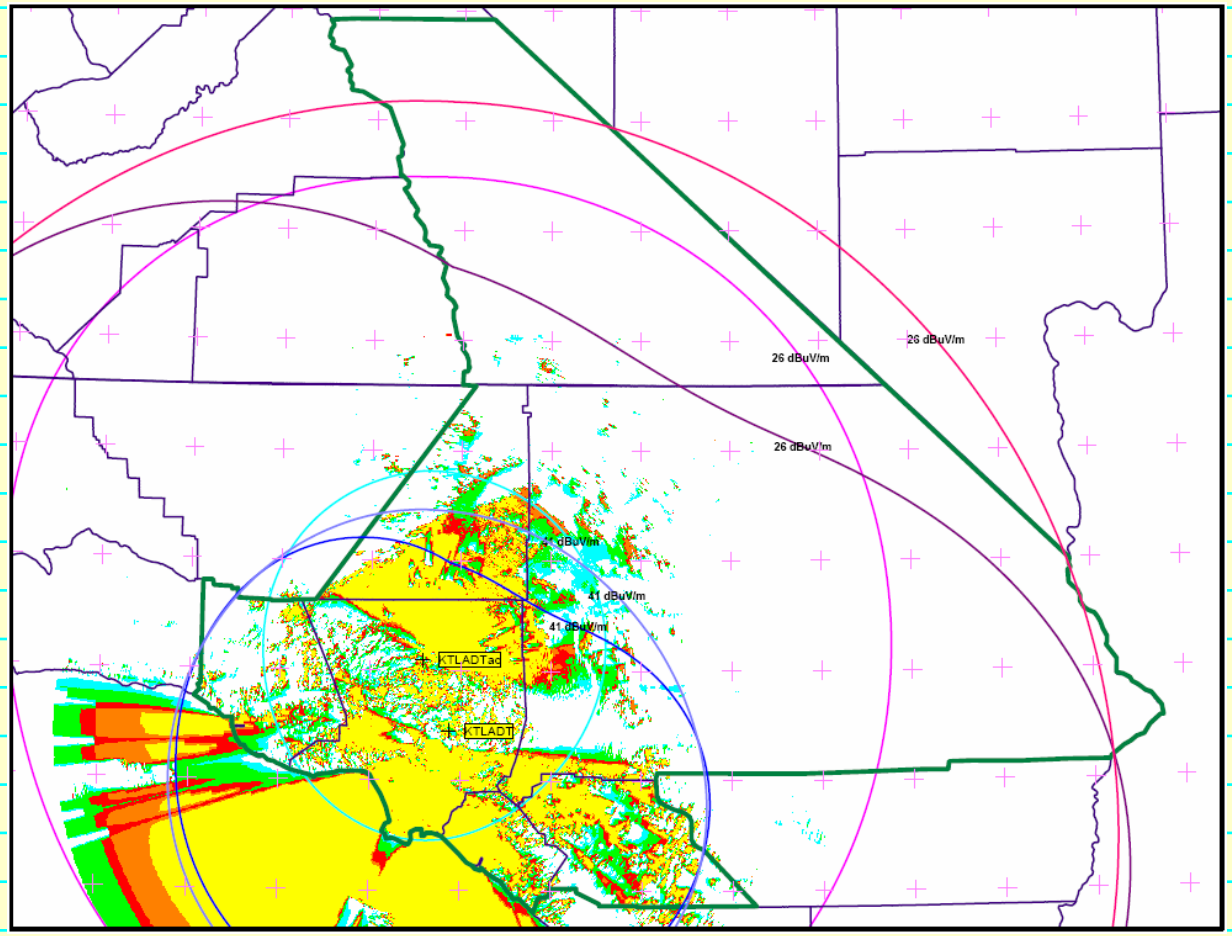
Example: Los Angeles (4)

- ✓ KTLA-DT Chnl 31, 1 MW Mt Wilson, w/10 kW DTxT Acton



Example: Los Angeles (5)

- ✓ KTLA-DT Chnl 31, 1 MW Mt Wilson, w/50 kW DTxT Acton



Recommendations

- ✓ Continue to Apply *De Minimis* Limits
- ✓ Limit DTxT Locations to Inside DMAs
- ✓ Limit DTxT Service Areas by Population Served
  - ✓ ≥50% Served by Each DTxT Required To Be Within DMA
- ✓ Possibly Limit DTxT Service Areas with Interference Contours
  - ✓ For Areas Outside DMA